

Methamphetamine abuse

General: Meth increases release and blocks re-uptake of dopamine centrally. Dopamine is involved in reward, motivation, the experience of pleasure, and motor function. Through this, meth produces an intense euphoria, or “rush,” that many users feel after snorting, smoking, or injecting the drug.

Street name: Speed, ice, glass, crystal, meth, chalk

Symptoms:

- Increased wakefulness, physical activity, and hyperthermia
- Tachycardia, arrhythmias, and hypertension
- Dilated pupils and dry mouth

Long-term effects of chronic use:

- Damage to dopamine producing and serotonin producing neurons → psychosis/schizophrenia (visual and auditory hallucinations), paranoia, mood disturbances, violent behavior, anxiety, confusion, insomnia, and Parkinsons Dz
- Increased levels of pro-inflammatory cytokines → CV disease, vasculitis, and strokes
- Dry mouth, poor dental hygiene, and bruxism → severe dental problems.
- Increased risky behavior/IV use → infectious diseases such as HIV/AIDS and hepatitis.

Epidemiology:

- Worldwide, 40 million have used amphetamines or non-cocaine stimulants
- 8.8 million in US had tried meth in 2000, by 2002 it grew to 12.4 million (5.3% of US population)
- In 2004 lifetime meth use in high school seniors was 6.2%
- The quickest growing drug of abuse in US
- Hospital emergency department mentions of MA rose 169% from 1999 to 2002
- Treatment-seeking for MA in the US rose from 14,554 in 1992 to 80,678 in 2001

Risk Factors:

- Hx of heroin/opioid, alcohol, and tobacco abuse
- Family drug abuse, family hx of crime
- Psych disorders (depression, bipolar, ADHD), risky sexual behavior

Diagnosis:

- Screening: urine – 3-5 days, blood – 1-3 days, hair – up to 90 days
- Signs and symptoms suggestive of meth use

Treatment and follow-up:

- Most effective treatments are comprehensive cognitive-behavioral interventions.
 - The Matrix Model = a behavioral treatment approach that combines behavioral therapy, family education, individual counseling, 12-step support, drug testing, and encouragement for nondrug-related activities
 - Contingency management interventions, which provide tangible incentives in exchange for engaging in treatment and maintaining abstinence, have also been shown to be effective.
- There are no medications at this time approved to treat methamphetamine addiction

Brent Porteous R-1
7-2012

Resources:

<http://www.drugabuse.gov/drugs-abuse/methamphetamine> (Nat'l institute of drug abuse)
http://www.mdconsult.com/das/pdxmd/body/345303371-3/1331986485?type=med&eid=9-u1.0-_1_mt_6020119
<http://www.sciencedaily.com/releases/2007/06/070625193422.htm>
<http://www.ncbi.nlm.nih.gov/pubmed/18957076>